WTDC25MP-5

25G SFP28 Direct Attach Cable (DAC) 5m 26AWG



1. Product Overview

SFP28 Direct Attach Cables are compliant with SFF-8432 and SFF-8402 specifications. Various choices of wire gauge are available from 30 to 26 AWG with various choices of cable length (up to 5m).

The SFP28 passive cable assemblies are high performance, cost effective I/O solutions for 25G Ethernet. SFP28 copper cables allow hardware manufactures to achieve high port density, configurability and utilization at a very low cost and reduced power budget.

Applications l Benefits

25G Ethernet

Features

- Up to 25.78125 Gbps data rate
- Up to 5-meter transmission
- Hot-pluggable SFP 20PIN footprint
- Improved Pluggable Form Factor (IPF)
- compliant for enhanced EMI/EMC
- performance
- Compatible to SFP28 MSA
- Compatible to SFF-8402 and SFF-8432
- Temperature Range: 0~ 70 °C
- RoHS Compatible
- Pin Function Definition
- High Speed Characteristics

Applications

2. Pin Descriptions

Pin	Pin	Logic	Symbol	Symbol	Name/Description	Notes
1	1		VeeT	VeeT	Transmitter Ground	
2	2	LV-TTL-O	TX_Fault	TX_Fault	N/A	1
3	3	LV-TTL-I	TX_DIS	TX_DIS	Transmitter Disable	2
4	4	LV-TTL-I/O	SDA	SDA	Tow Wire Serial Data	
5	5	LV-TTL-I	SCL	SCL	Tow Wire Serial Clock	
6	6		MOD_DEF0	MOD_DEF0	Module present, connect to VeeT	
7	7	LV-TTL-I	RS0	RS0	N/A	1

Pin	Pin	Logic	Symbol	Symbol	Name/Description	Notes
8	8	LV-TTL-O	LOS	LOS	LOS of Signal	2
9	9	LV-TTL-I	RS1	RS1	N/A	1
10	10		VeeR	VeeR	Receiver Ground	
11	11		VeeR	VeeR	Receiver Ground	
12	12	CML-O	RD-	RD-	Receiver Data Inverted	
13	13	CML-O	RD+	RD+	Receiver Data Non-Inverted	
14	14		VeeR	VeeR	Receiver Ground	
15	15		VccR	VccR	Receiver Supply 3.3V	
16	16		VccT	VccT	Transmitter Supply 3.3V	
17	17		VeeT	VeeT	Transmitter Ground	
	18	CML-I	TD+		Transmitter Data Non-Inverted	
	19	CML_I	TD-		Transmitter Data Inverted	
	20		VeeT		Transmitter Ground	
1.	Signals not supported in SFP+ Copper pulled-downto VeeT with 30K ohms resistor	Signals not supported in SFP+ Copper pulled-downto VeeT with 30K ohms resistor	Signals not supported in SFP+ Copper pulled-downto VeeT with 30K ohms resistor	Signals not supported in SFP+ Copper pulled-downto VeeT with 30K ohms resistor	Signals not supported in SFP+ Copper pulled-downto VeeT with 30K ohms resistor	
2.	Passive cable assemblies do not support	Passive cable assemblies do not support	Passive cable assemblies do not support	LOS and TX_DIS	LOS and TX_DIS	

3. Additional Specifications

Parameter	Parameter	Symbol	Symbol	Min	Typical	Max	Unit	Unit	Note
Differential Impedance	Differential Impedance	RIN, P-P	RIN, P-P	90	100	110	Ω	Ω	
Insertion loss	Insertion loss	SDD21	SDD21	8		22.48	dB	dB	At 12.8906 GHz
Differential Return Loss	Differential Return Loss	SDD11		12.45		See 1	dB	dB	At 0.05 to 4.1 GHz
Differential Return Loss	Differential Return Loss	SDD22	SDD22	3.12		See 2	dB	dB	At 4.1 to 19 GHz
		SDD22	SDD22	3.12		See 2	dB	dB	At 4.1 to 19 GHz
Common-mode to	Common-mode to	SCC11	SCC11				dB	dB	
common-mode	common-mode	SCC11	SCC11	2			dB	dB	At 0.2 to 19 GHz
common-mode	common-mode	SCC22	SCC22	2			dB	dB	At 0.2 to 19 GHz
output return loss	output return loss	SCC22	SCC22						
output return loss	output return loss								

Parameter	Parameter	Symbol	Symbol	Min	Typical	Max	Unit	Unit	Note
Differential to common-mode	Differential to common-mode	SCD11		12		See 3	dB		At 0.01 to 12.89 GHz
Differential to common-mode	Differential to common-mode	SCD11					dB		
return loss	return loss	SCD22	SCD22	10.58		See 4	dB		At 12.89 to 19 GHz
return loss	return loss	SCD22	SCD22	10.58		See 4			At 12.89 to 19 GHz
				10					At 0.01 to 12.89 GHz
Differential to common Mode	Differential to common Mode	SCD21-IL				See 5	dB		At 12.89 to 15.7 GHz
Conversion Loss	Conversion Loss	SCD21-IL				See 5	dB		At 12.89 to 15.7 GHz
				6.3					At 15.7 to 19 GHz
Channel Operating Margin	Channel Operating Margin	COM	COM	3			dB	dB	
Notes: Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT (f), with f in GHz Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22) *f, with f in GHz	Notes: Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT (f), with f in GHz Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22) *f, with f in GHz	Notes: Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT (f), with f in GHz Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22) *f, with f in GHz	Notes: Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT (f), with f in GHz Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22) *f, with f in GHz	Notes: Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT (f), with f in GHz Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22) *f, with f in GHz	Notes: Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT (f), with f in GHz Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22) *f, with f in GHz	Notes: Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT (f), with f in GHz Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22) *f, with f in GHz	Notes: Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT (f), with f in GHz Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22) *f, with f in GHz	Notes: Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT (f), with f in GHz Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22) *f, with f in GHz	Notes: Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT (f), with f in GHz Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22) *f, with f in GHz	Notes: Reflection Coefficient given by equation SDD11(dB) < 16.5 - 2 × SQRT (f), with f in GHz Reflection Coefficient given by equation SDD11(dB) < 10.66 - 14 × log10(f/5.5), with f in GHz Reflection Coefficient given by equation SCD11(dB) < 22 - (20/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD11(dB) < 15 - (6/25.78) *f, with f in GHz Reflection Coefficient given by equation SCD21(dB) < 27 - (29/22) *f, with f in GHz

4. Additional Specifications

Length (m)	Cable AWG
1	30

Length (m)	Cable AWG
2	30
3	30/26
4	26
5	26

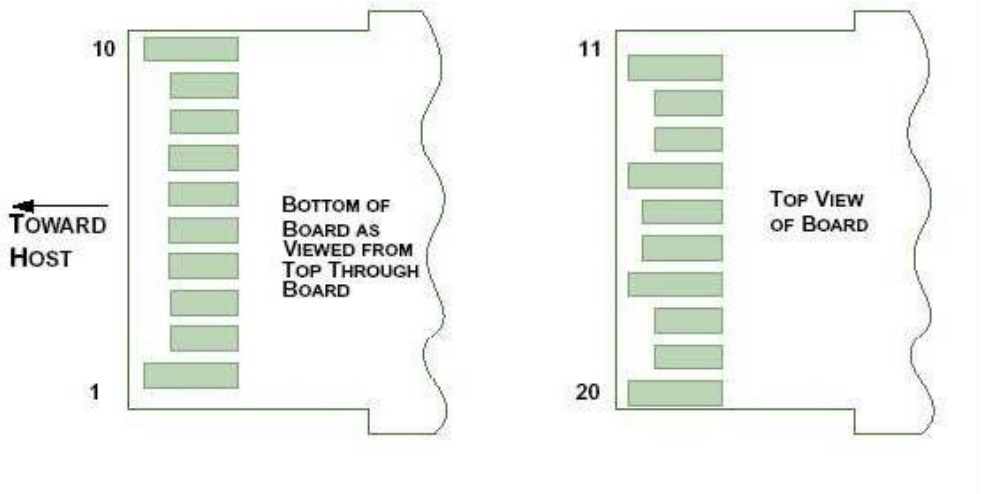
5. Regulatory Compliance

Feature	Test Method	Performance
Electrostatic Discharge (ESD) to the Electrical Pins	MIL-STD-883C Method 3015.7	Class 1(>2000 Volts)
Electromagnetic Interference (EMI)	FCC Class B	Compliant with Standards
Electromagnetic Interference (EMI)	CENELEC EN55022 Class B	Compliant with Standards
Electromagnetic Interference (EMI)	CISPR22 ITE Class B	Compliant with Standards
RF Immunity (RFI)	IEC61000-4-3	Typically Show no Measurable Effect from a 10V/m Field Swept from 80 to 1000MHz
RoHS Compliance	RoHS Directive 2011/65/EU and it's Amendment Directives 6/6	RoHS 6/6 compliant

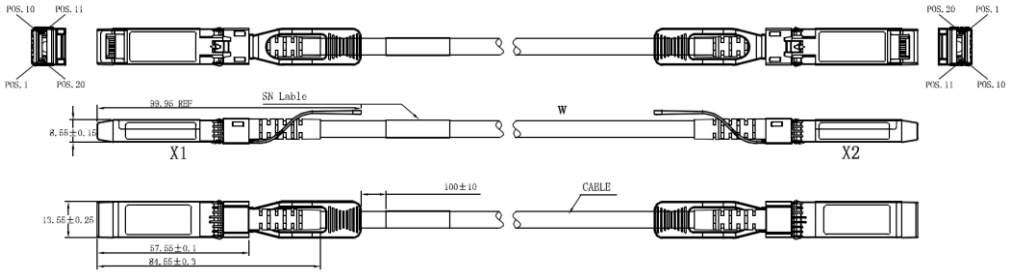
6. Cable Product Photograph



7. Pin Assignment



8. Mechanical Specifications



9. Revision History

Version	Date	Description	Prepared by
V6	2025	Unified WincoTek datasheet format	WincoTek
V6.1	2026-10-23	Engineering and format review	WincoTek